



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/697,562	10/26/2000	Stephen Francis Bush	BB1165 US NA	3393

6147 7590 05/12/2004
GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH
PATENT DOCKET RM. BLDG. K1-4A59
SCHENECTADY, NY 12301-0008

EXAMINER

TRAN, PHILIP B

ART UNIT	PAPER NUMBER
----------	--------------

2155

DATE MAILED: 05/12/2004

2

Please find below and/or attached an Office communication concerning this application or proceeding.

OK

Office Action Summary

Application No.

09/697,562

Applicant(s)

BUSH ET AL.

Examiner

Philip B Tran

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. This is an acknowledgment that the instant application is related to and claims priority from U.S. Patent Application serial number 60/162,901 which was filed on November 01, 1999.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-6 are rejected under 35 U.S.C. § 102(e) as being anticipated by Aimoto U.S. Pat. No. 6,570,876.

Regarding claim 1, Aimoto teaches a communications network (= packet switching network) [see Col. 1, Lines 8-16] comprising:

at least one source unit configured to generate messages for relay (= incoming packets from the network via input port IN) [see Fig. 1 and Col. 5, Lines 23-29];

a smart node (= switch (1)) capable of storing programming instructions (= packet queuing algorithm and command) [see Abstract and Col. 3, Lines 59-64 and Col. 6, Lines 59-64], receiving messages for relay from said source unit (= receiving packets incoming from the network by the packet receiving unit (2) and storing packets in buffer memory (72) by the relaying priority control unit (3) and transferring packets to the packet relaying unit (4) according to priority) [see Fig. 1 and Col. 5, Lines 23-30], dynamically reprioritizing the received messages for relay (= the transmission priority control unit (5) performs storing packets received from the relaying unit in a transmission buffer memory (83) and classifying packets into a plurality of groups and queuing those packets according to the priority for each group) [Col. 6, Lines 1-10 and Col. 6, Lines 15-22], and transmitting the reprioritized received messages (= the packet transmission unit (6) transmits packets received from the read-out circuit (81) of the queues (83) to an output port OUT) [see Col. 6, Lines 35-39]; and

at least one portal node adapted to receive said reprioritized received messages transmitted from said smart node (= the packet transmission unit (6) transmits packets received from the read-out circuit (81) of the queues (83) to an output port OUT connected to a network [see Figs. 1-2 and Col. 5, Lines 31-41 and Col. 6, Lines 35-39]. This suggests that the reprioritized packets are transmitted out of the switch to another node (next/destination node) in the network).

Regarding claim 2, Aimoto further teaches said smart node comprises an electronic computer for executing said programming instructions (= a network manager can change the packet queuing algorithm by issuing a command from the management terminal PT (16Cn)) [see Figs. 1-2 and Col. 6, Lines 59-64 and Col. 7, Lines 23-30].

Regarding claim 3, Aimoto further teaches said programming instructions comprise active messages (= control command for changing packet queuing algorithm) [see Col. 6, Lines 59-64 and Col. 7, Lines 23-30].

Regarding claim 4, Aimoto teaches a communications network (= packet switching network) [see Col. 1, Lines 8-16] comprising:

at least one source unit configured to generate messages for relay (= incoming packets from the network via input port IN) [see Fig. 1 and Col. 5, Lines 23-29];

a smart node (= switch (1)) capable of receiving programming instructions and storing said programming instructions (= packet queuing algorithm and command) [see Abstract and Col. 3, Lines 59-64 and Col. 6, Lines 59-64], receiving messages for relay from said source unit and storing the received messages for relay in a queue (= receiving packets incoming from the network by the packet receiving unit (2) and storing packets in buffer memory (72) by the relaying priority control unit (3) and transferring packets to the packet relaying unit (4) according to priority) [see Fig. 1 and Col. 5, Lines 23-30], and dynamically reprioritizing the received messages for relay in said queue (= the transmission priority control unit (5) performs storing packets received from the

relaying unit in a transmission buffer memory (83) and classifying packets into a plurality of groups and queuing those packets according to the priority for each group) [Col. 6, Lines 1-26];

at least one portal node adapted to receive said retransmitted received messages from said at least one smart node for relay (= the packet transmission unit (6) transmits packets received from the read-out circuit (81) of the queues (83) to an output port OUT connected to a network [see Figs. 1-2 and Col. 5, Lines 31-41 and Col. 6, Lines 35-39]. This suggests that the reprioritized packets are transmitted out of the switch to another node (next/destination node) in the network); and

at least one communications node adapted to send said programming instructions to said smart node (= management terminal PT (16Cn) issuing a command via management unit (9) for changing packet queuing algorithm) [see Figs. 1-2 and Col. 6, Lines 59-64 and Col. 7, Lines 23-30].

Regarding claim 5, Aimoto further teaches said smart network comprises:

a message storage queue (= a plurality of queues (83)) [see Fig. 1 and Col. 6, Lines 11-26];

a transmitter (= packet transmission unit (6)) [see Fig. 1 and Col. 6, Lines 35-39];

a receiver (= packet receiving unit (2)) [see Fig. 1 and Col. 5, Lines 23-30];

a queue controller for writing messages received at said smart node into said message storage queue (= relaying priority control unit (3) for storing the packets in the buffer memory (72) with a plurality of queues (Q1 to Qn) and transferring to the packet

relaying unit (4) before sending packets to a plurality of queues (Q10 to Q1n) ... (Qj0 to Qjn)) [see Fig. 1 and Col. 5, Lines 23-30 and Col. 6, Lines 11-26] and for removing messages from said message storage queue for relay transmission by said transmitter (= packet read out circuits ((81) & (82)) for reading out packets from the queues and forwarding to the packet transmission unit (6) to output port) [see Fig. 1 and Col. 6, Lines 28-39]; and

a dynamic reprioritization controller (= transmission priority control unit (5)) for specifying an order of transmission of said message for relay transmission by said transmitter (= the transmission priority control unit (5) performs storing packets received from the relaying unit in a transmission buffer memory (83) and classifying packets into a plurality of groups based on the header information of each of those packets and queuing those packets according to the priority for each group) [Col. 6, Lines 1-10 and Col. 6, Lines 15-22].

Regarding claim 6, Aimoto further teaches at least one receiver for receiving said messages for relay from said source unit (= packet receiving unit (2) for receiving incoming packets from the network via input port IN) [see Fig. 1 and Col. 5, Lines 23-29].

Other References Cited

4. The following references cited by the examiner but not relied upon are considered pertinent to applicant's disclosure.

A) Harrison et al, U.S. Pat. No. 6,091,709, discloses quality of service management for packet switched networks with packet prioritizer for prioritizing and steering packets to queues.

B) Wong, U.S. Pat. No. 5,974,465, discloses prioritizing the enqueueing of outbound data packets in a network device.

C) Ban, U.S. Pat. No. 5,506,966, discloses traffic control for queuing prioritized messages.

D) Michiel, U.S. Pat. No. 6,724,766, discloses prioritized data transmission of packets.

E) Newber et al, U.S. Pat. No. 6,115,365, discloses queuing and transmitting messages with priority.

F) Awadallah et al, U.S. Pat. No. 6,449,251, discloses dynamic data packet prioritization.

G) Naito, U.S. Pat. No. 5,872,929, discloses managing the messages waiting for transmission services in a message queue.

H) Baber et al, U.S. Pat. No. 6,658,485, discloses dynamic priority-based scheduling in a message queuing system.

I) Kidder et al, U.S. Pat. No. 5,903,735, discloses prioritization of data in the transmission queues.

J) Fluss, U.S. Pat. No. 6,304,578, discloses packet routing and queuing with priority.

5. A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS ACTION IS SET TO EXPIRE THREE MONTHS, OR THIRTY DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. FAILURE TO RESPOND WITHIN THE PERIOD FOR RESPONSE WILL CAUSE THE APPLICATION TO BECOME ABANDONED (35 U.S.C. § 133). EXTENSIONS OF TIME MAY BE OBTAINED UNDER THE PROVISIONS OF 37 CAR 1.136(A).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Tran whose telephone number is (703) 308-8767. The Group fax phone number is (703) 872-9306.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam, can be reached on (703) 308-6662.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Philip Tran
Philip B. Tran
Art Unit 2155
May 08, 2004